



REPUBLIC OF TÜRKİYE  
MINISTRY OF AGRICULTURE  
AND FORESTRY

# PESTICIDE REGULATION APPROACHES IN TÜRKİYE



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REPUBLIC OF TÜRKİYE  
MINISTRY OF AGRICULTURE  
AND FORESTRY

Minister

Deputy Minister (4)

Staff (64,231)

Total Agricultural Establishments (3,022,000)

Livestock Establishments (1,716,197)

Food Establishments (706,926)

Feed Establishments (16,060)

### CENTRAL UNITS

- General Directorate for European Union and Foreign Relations
- General Directorate of Fisheries and Aquaculture
- General Directorate of Plant Production
- General Directorate of Nature Conservation and National Parks
- General Directorate of Food and Control
- General Directorate of Livestock
- General Directorate of Staff
- General Directorate of Water Management
- General Directorate of Agricultural Reform
- General Directorate of Agricultural Research and Policies
- Directorate of Strategy Development
- Legal Consultancy Department
- Department of Sugar
- Department of Training and Publication
- Department of Information Technologies
- Department of Tobacco and Alcohol
- Department of Guidance and Inspection
- Department of Internal Audit
- Support Services Head of Department

### AFFILIATED AND RELATED ORGANIZATIONS

- Ataturk Forest Farm Directorate
- General Directorate of State Hydraulic Works
- General Directorate of Forestry
- Türkiye Water Institute
- General Directorate of Tea Businesses
- General Directorate of Meat and Dairy Institution
- General Directorate of Agricultural Businesses
- Agriculture and Rural Development Support Institution
- General Directorate of Soil Products Office
- General Directorate of Turkey Sugar Factories Inc.

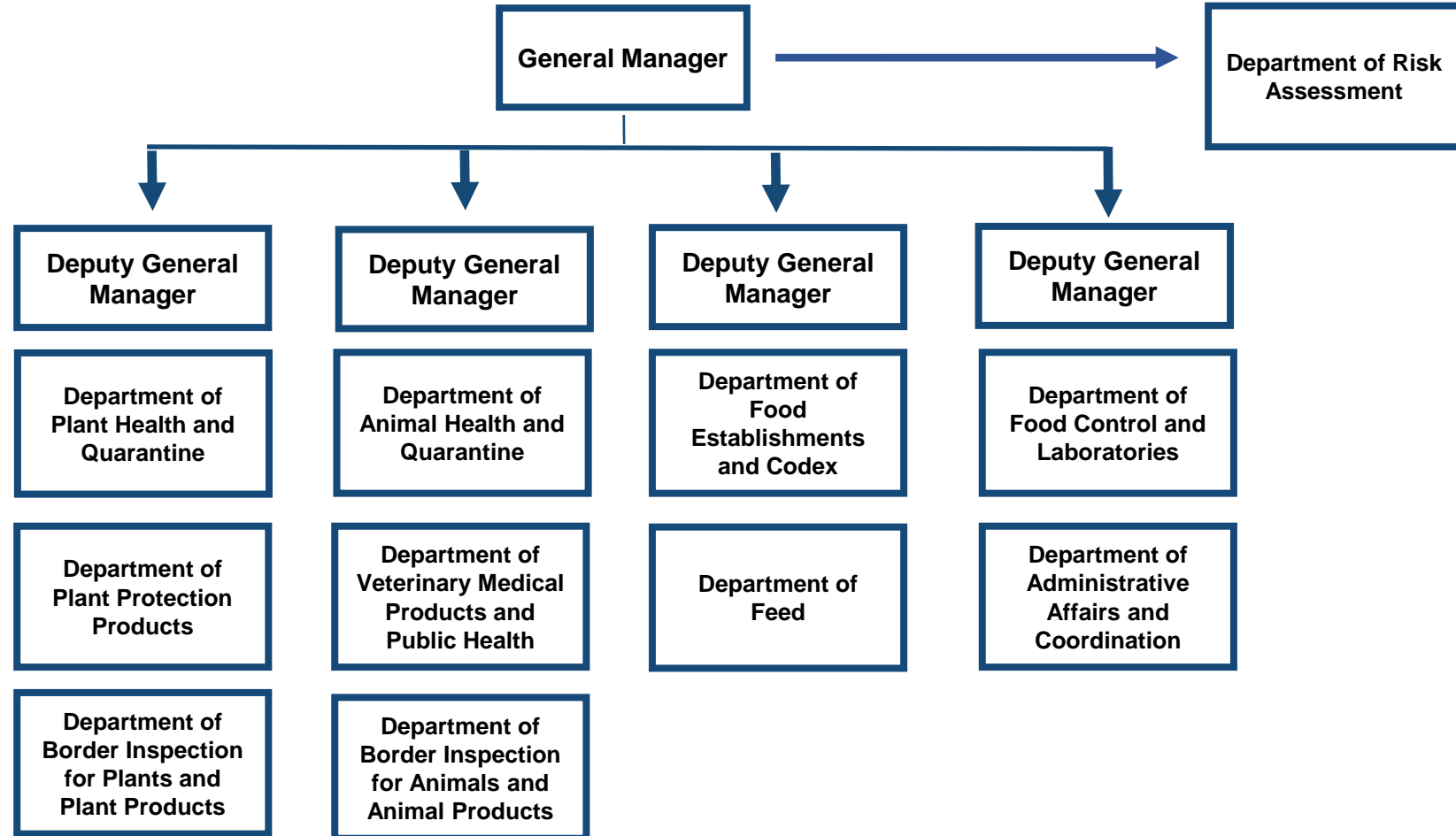
### PROVINCIAL UNITS

- Research Institutes
- Regional Directorates
- Education Center Directorates
- Food Control Laboratory Directorate (41)
- Provincial Directorates (81)
- District Directorates (921)
- Kafkas Bee Production Training and Gene Center Directorate
- Agricultural Equipment and Machinery Test Directorate
- Seed Certification Test Directorates (10)
- Veterinary Control Institute Directorates (9)
- Veterinary Border Inspection Post Directorates (22)
- Agricultural Quarantine Directorates (12)





## GENERAL DIRECTORATE OF FOOD AND CONTROL (GDFC)







- Forestry (227,400 km<sup>2</sup>)
- Farm Plants (156,280 km<sup>2</sup>)- wheat, sugar beet, barley, sweetcorn, patato, sunflower ...
- Meadow and Pasture (146,170 km<sup>2</sup>)
- Fruits, Beverage and Spice (35,640 km<sup>2</sup>)- apple, grape, olive, orange, mandarin, lemon, apricot, hazelnut, pistachio, fig....
- Fallow (31,730 km<sup>2</sup>)
- Vegetables (7,790 km<sup>2</sup>)- tomato, cucumber, watermelon, pepper, onion, bean, aubergine...
- Ornamental Plants (50 km<sup>2</sup>)



## Agriculture and Forestry Area

### Livestock and Aquaculture

Number of cattle	18,036,117
Number of sheep and goats	57,519,204
Milk production (tonnes)	22,960,379
Meat production (tonnes)	1,201,469
Egg production (million pieces)	19,788
Poultry (tonnes)	2,136,263
Number of hives (pieces)	8,733,394
Honey production (tonnes)	96,344
Aquaculture (tonnes)	785,811







#### Production and export data of Turkey

Foods	Türkiye 5-Year Average Production (Tonnes)	World 5-Year Average Production (Tonnes)	Production Rate %	Türkiye 5-Year Average Exports (Tonnes)	World 5-Year Average Exports (Tonnes)	Exports Rate %
Dried Vine Fruits	277,000	1,259,091	22	244,974	790,239	31
Dried Figs	76,741	142,112	54	70,568	121,670	58
Dried Apricots	105,602	182,072	58	80,049	111,179	72
Pistachios	127,400	670,526	19	10,867	347,622	3
Hazelnuts	332,500	481,884	69	249,198	332,264	75

\*Source: International Nut and Dried Fruit Council - INC







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Great Mosque and Hospital of Divriği Sivas  
UNESCO

# PLANT PROTECTION PRODUCTS (PPP)



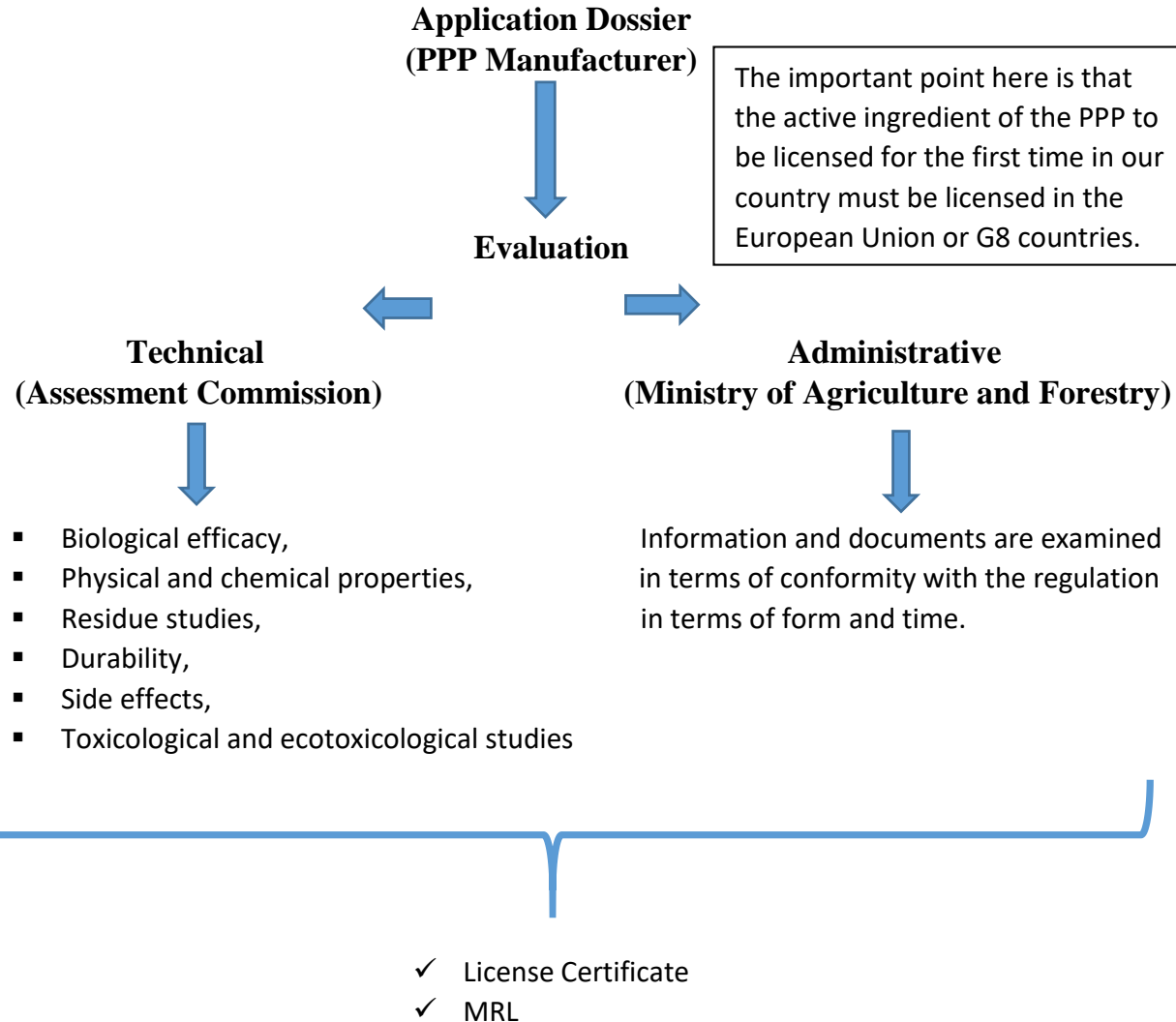
## PLANT PROTECTION PRODUCTS LEGISLATION

In our country, the licensing, import, manufacture, control, wholesale and retail sale of plant protection products are carried out in accordance with the Veterinary Services, Plant Health, Food and Feed Law No. 5996 and the legislation enacted in accordance with the law. Legislation enacted in this context:

- Regulation on Licensing and Placing on the Market of Plant Protection Products dated 09.11.2017 and numbered 30235,
- Regulation on Trials of Plant Protection Products, dated 09.11.2017 and numbered 30235,
- Regulation on Classification, Packaging and Labeling of Plant Protection Products dated 25.03.2011 and numbered 27885,
- Regulation on Wholesale and Retail Sale and Storage of Plant Protection Products dated 13.02.2019 and numbered 30685,
- Regulation on the Import of Plant Protection Products and Raw Materials of Plant Protection Products, dated 14.12.2018 and numbered 30625,
- Regulation on Plant Protection Product Production Sites Procedures and Principles dated 06.07.2011 and numbered 27986,
- Plant Protection Products Control Regulation dated 20.05.2011 and numbered 27939.



## LICENSING PPP and DETERMINING MRL



### Residue Studies and MRL

- Regulation on Trials of Plant Protection Products
- Standard Trial Methods
- at least three regions
- at least eight attempts on major products and at least four attempts on minor products (different growing season)





**Pesticide use amount: 2.22 kg/ha (World average: 4.48 kg/ha)**

# TRACEABILITY SYSTEMS





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Patara Ancient City - Antalya

MAXIMUM  
RESIDUE  
LIMITS





## Domestic products

MRLs determined by the Regulation on Licensing and Placing on the Market of Plant Protection Products

ANNEX-2

The "Turkish Food Codex Regulation on Maximum Residue Limits of Pesticides" published in the Official Gazette dated 27 September 2021 and numbered 31611

ANNEX-3

## Imported products

Within the scope of harmonization with the European Union acquis, MRLs and LODs are generally compatible with the EU Regulation No 396/2005.



EPHASUS- UNESCO World Heritage Centre  
İzmir/Türkiye

#### ANNEX-1

- ✓ Fruits, Fresh or Frozen; Tree Nuts
- ✓ Vegetables, Fresh or Frozen
- ✓ Pulses
- ✓ Oilseeds and Oil Fruits
- ✓ Cereals
- ✓ Teas, Coffee, Herbal Infusions, Cocoa and Carobs
- ✓ Hops
- ✓ Spices
- ✓ Sugar Plants
- ✓ Products of Animal Origin -Terrestrial Animals
- ✓ Processed Food Products

#### ANNEX-4

Banned active substances

#### ANNEX-5

Active substances not applied MRL





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United Nations  
Educational, Scientific and  
Cultural Organization



GAZİANTEP  
CITY OF GASTRONOMY

Member of the  
UNESCO Creative Cities  
Network since 2015



# OFFICIAL CONTROLS

Gastroantep International Gaziantep Gastronomy Festival  
UNESCO Creative Cities Network (Gaziantep)



## PRE-HARVEST OFFICIAL CONTROLS

- Aim: Prevention of wrong pesticide use and prevention of risk in primary production area
- Since 2012
- Pre-harvest Official Control Procedure
- Pre-harvest Official Control Plan
- Analytical Quality Control and Method Validation Procedures for Pesticide Residues Analysis in Food and Feed
- Turkish Food Codex Regulation on Maximum Residue Limits of Pesticides

Number of Sample (for pesticides): 24,525  
(fresh fruits and vegetables Pre-harvest controls 2022)

Annual Control Plan

Sampling

Analysis

Evaluation





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## MANAGING PESTICIDE USE

Integrated Pest Management (IPM) Projects:

Prescribing

Biological and Biotechnical Control Methods

Training and Publication Studies



Veterinary Services, Plant Health, Food and Feed Law No. 5996

- Regulation on Official Controls of Food and Feed
- Turkish Food Codex Communique on Sampling Methods for Official Control of Pesticide Residues in Food
- Analytical Quality Control and Method Validation Procedures for Pesticide Residues Analysis in Food and Feed
- Turkish Food Codex Regulation on Maximum Residue Limits of Pesticides

Annual  
Control Plan

Sampling

Analysis

Evaluation

POST-HARVEST OFFICIAL CONTROLS





- ❖ Food control officer (7.620)
- ❖ Food Establishments (723.396)
- ❖ Risks
  - ✓ previous year statistics
  - ✓ production and consumption quantities
  - ✓ feedbacks (RASFF, etc.)
  - ✓ export products
- ❖ Control Points
  - manufacturing points
  - wholesale and retail sales points
  - food packaging

- ❖ Laboratory Technical Staff (1.435)
- ❖ 13 Official and 38 private laboratory.
- ❖ Minimum 420 active substances
- ❖ ISO/IEC 17025:2017
- ❖ Proficiency tests
- ❖ GC-MS/MS, LC-MS/MS, GC-MS\MS-HS (Headspace), Orbitrap LC-MS/MS Q Exactive, Orbitrap GC-MS/MS Q Exactive, GC-ECD, etc

Sample (pesticides): 5251  
(fresh fruits and vegetables  
Post-harvest controls 2022)





# Risk Assessment for Pesticides

## 1-Annual Pesticide Data Analysis Reports

It includes analysis results and evaluations within the scope of residue control and inspection programs (pre-harvest / post-harvest) of pesticides used in fresh vegetables and fruits.

In addition, the Rapid Alert System for Food and Feed (RASFF) notification data by EU countries is also taken into account.

## 2-Assessment of Exposure to Pesticide Residues in Fresh Vegetables and Fruits

Annual inspection programs assess our national exposure using pesticide residue data.

### Product Identification

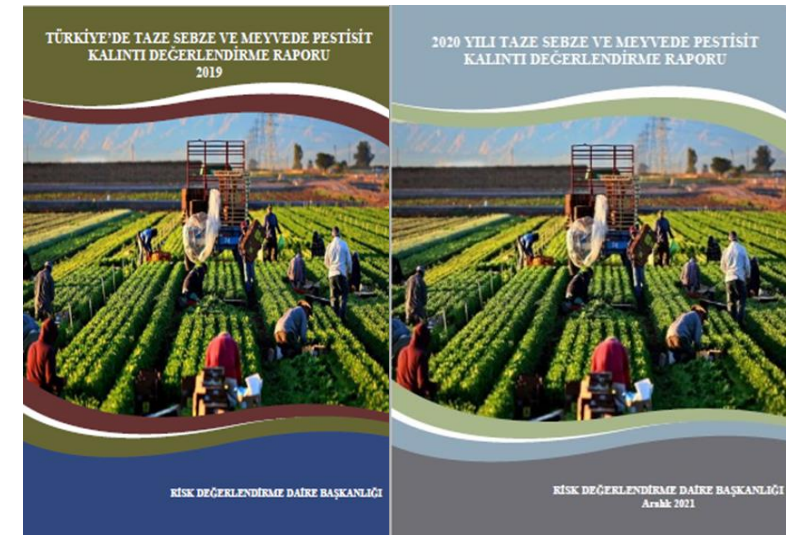
National annual/daily consumption amounts  
Sample numbers  
Negative percentages  
RASFF notifications

### Selection of active ingredients

The number of actives used against a large number of harmful organisms  
Negative percentages  
Non-recommended usage rate  
RASFF notifications

### Determination of exposure methodology

WHO (Theoretical Maximum Daily Intake)  
FAO,  
EFSA, PRIMo (WHO, FAO, Rees-Day)



Veterinary Services, Plant Health, Food and Feed Law No. 5996

IMPORT OFFICIAL CONTROLS

- Regulation on Official Controls of Food and Feed
- Regulation on Official Controls for Import of Plant Origin Food and Feed
- Pre-Notification via Food Safety Information System (FSIS)([www.ggbs.tarim.gov.tr](http://www.ggbs.tarim.gov.tr)), Phytosanitary and/or Health Certificate
- Documentary Check, Identity Check, Physical Check (Sampling and Frequency of Analysis)
- As a result of the official control, products which comply with Turkish Food and Feed Law are allowed to entry to Turkish territory.

**Legal Basis**

**Mandatory Documents**

**Control stages**

**Evaluation**



## Veterinary Services, Plant Health, Food and Feed Law No. 5996

- Issue of Health Certificate for Food of Plant Origin and Feed Export and Implementing Regulation for Products that Return from Export
- Preregistry to FSIS
- During control, if required, samples are taken by the food controller, Inspection report and analysis report are evaluated according to Recipient country demand and/or Turkish Food and Feed Legislation.
- Issue of Health Certificate.

**Legal Basis**

**Mandatory Documents**

**Control stages**

**Evaluation**



**EXPORT CONTROLS**







# IMPORT TOLERANCE

## MRL Calculation

- GLP/Good Laboratory Practices
- GAP Good Agricultural Practices
  - Certification
  - Accreditation
  - High Cost

## MRL Harmonization

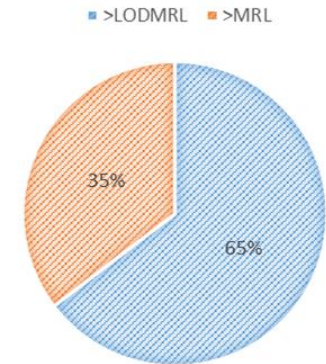
- ✓ External Audit
- ✓ Risk Assessment

simplified import tolerance system

## Fresh fruit and vegetables exported to the EU

Years (Tonnes)	Export (Tonnes)	Product Returned from Export (Tonnes)	%
2018	817,713	1,340	0,16
2019	706,864	1,120	0.16
2020	834,482	1,382	0.16
2021	950,200	2,329	0.24
2022	911,677	3,305	0,36
<b>5-years</b>	<b>4,220,936</b>	<b>9,478</b>	<b>0.22</b>

## RASFF NOTIFICATION (2022)



Total RASFF Notification (2022)	311
>LOD <sub>MRL</sub>	201
>MRL	110



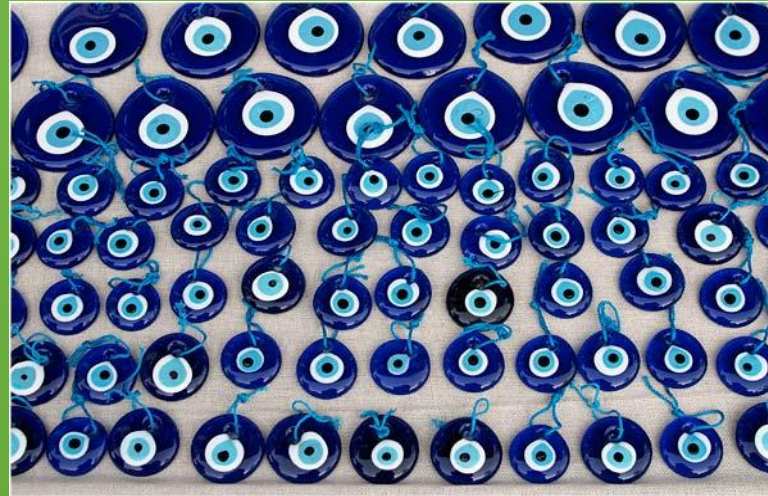
Bursa and Cumalıkızık: the Birth of the Ottoman Empire  
UNESCO World Heritage Centre



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THANK YOU  
FOR  
ATTENTION

TÜRKİYE  
"THE MELTING POT OF  
CIVILISATIONS"



***Come and Enjoy!***